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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,384

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Kazuaki Bando

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EXAMINER

SCRUGGS, ROBERT J

ART UNIT

PAPER NUMBER

3723

MAIL DATE

DELIVERY MODE

08/11/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,384	Applicant(s) BANDO, KAZUAKI	
	Examiner ROBERT SCRUGGS	Art Unit 3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 15-18 and 25 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 15-18 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 24, 2010 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13, 15, 17, 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bando (5396736) in view of Bovone (5433657) and Ercole et al. (4848005).

In reference to claims 13, 15 and 25, Bando discloses a glass-plate working apparatus comprising; grinding means (8) for grinding a peripheral edge of a glass plate (22), grinding supporting means (19) for supporting the glass plate whose peripheral edge is to be ground by said grinding means and transporting means formed with multiple lifting devices, one lifting device (56a) (Figure 1) for raising the glass plate to be carried in,

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another lifting device (56B) for raising the glass plate on the suction cup to be carried out the lifting devices are mounted to a slider (55) which is linearly movable in one direction, wherein said grinding supporting means includes a grinding supporting table (19) and teaches of using a single sucker unit for sucking the glass plate, wherein said grinding supporting means is movable in a direction (i.e. Y-axis) different from said direction in which said slider is linearly movable (i.e. X-axis) (Column 4, Lines 44-49), but lacks, a plurality of suction cups held on said grinding supporting table being attached by suction to said grinding supporting table to suck and hold the glass-plate by sucking the glass plate whose peripheral edge is to be ground and arranging means for disposing said plurality of suction cups, respectively, at positions corresponding to a shape of the glass-plate to be ground, wherein said arranging means includes a suction-cup supporting body for supporting said suction cups separately from said grinding supporting table, a suction-cup lifting device for raising the suction cup which is supported by said grinding supporting table or the suction-cup supporting body, and a suction-cup moving device which is adapted to move said suction cup raised by said suction-cup lifting device from on said grinding supporting table onto said suction-cup supporting body or from on said suction-cup supporting body onto said grinding supporting table in correspondence with the shape of the glass plate whose peripheral edge is to be ground by said grinding means. However, Bovone teaches a technique for sucking a glass-plate (1) to a table (2) by using a plurality of suction cups (3) that can be arranged to the shape of the glass-plate (Column 3, Lines 44-49). It would have been obvious to one of ordinary skill in the art to modify the device, of Bando, with the known

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technique of securing a glass-plate to a table by using a plurality of suction cups that can be arranged according to the shape of the glass-plate, as taught by Bovone, and the results would have been predictable. In this situation, one could prevent any bending forces arising on the glass-plate during operation. In addition, Ercole et al. teach a technique of providing arranging means that separately move work supporting elements (10) (Column 2, Lines 51-52, the work is not shown) from a worktable (2) by a linear movement of a pick-up tool (11) that is attached to a moving frame (3) (or slider) for selectively picking up said movable elements (10) from a support body (12) that supports said suction cups separately from said worktable (2) [i.e. the support body supports the elements at upper and medial portions which are separate from the lower portion of the element which the worktable supports and the examiner notes that if the applicant is trying to disclose different tables or different table surfaces for holding the elements than this to is also known in the art because one could provide two separate table surfaces or tables, one for conducting work (2a) and one for storing elements (2b) as evident by Ercole et al. 5625959, since table (2a) includes holes (9) and table (2b) does not] and positions said elements on said worktable or picks up said elements from said worktable and positions said elements back in said support body (Figure 1). It would have been obvious to one of ordinary skill in the art to modify the device, of Bando, with the known technique of providing automatic arranging means attached to a slider, as taught by Ercole et al., and the results would have been predictable. In this situation, since Bando teaches that multiple lifting devices (56a-c) are mounted to a slider, the pick-up tool, as taught by Ercole et al., that selectively positions that work

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supporting elements could also be mounted to slider (55) thereby providing a device that can more accurately and quickly position work supporting elements according to the work being used thus saving time and expense.

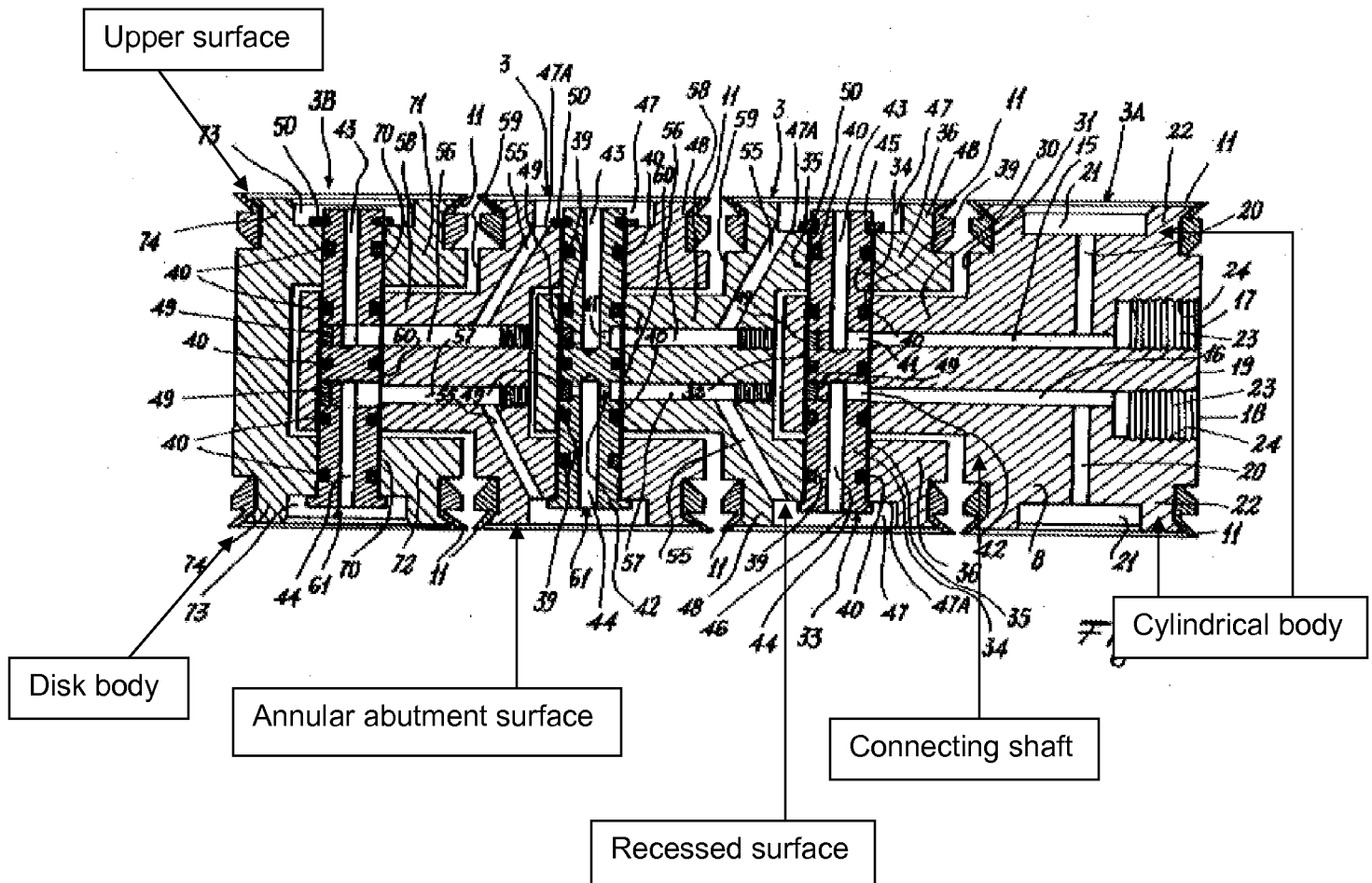
In reference to claim 17, Bovone also discloses a suction cup formed with an annular abutment surface (see figure below), a recessed surface (see figure below) held by suction (through lines 15, 16, 20, 55, 56).

In reference to claim 18, Bovone also discloses that the suction cup includes a disk body having the annular abutment surface and the recessed surface (see figure below), a cylindrical body whose upper surface is covered with an elastic member (11) for abutment against a lower surface of the glass plate (1) (see figure below) and a connecting shaft (see figure below) which connects said disk body and said cylindrical body, said suction cup being adapted to suck the glass plate through an opening in an upper surface of said elastic member and to be attached by suction to said grinding supporting table through the opening in the recessed surface of said disk body.

4. Claim 16, is rejected under 35 U.S.C. 103(a) as being unpatentable over Bando (5396736), in view of Bovone (5433657), Ercole et al. (4848005) and Monforte (4809425). Bando in view of Bovone and Ercole et al. disclose the claimed invention previously mentioned above and Bovone further teaches that the suction cup includes a

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cylindrical body whose upper surface (see figure below) is covered with an elastic member (11) for abutment against the glass plate (1), a disk body (bottom portion) (see figure below) for abutment against said grinding supporting table and a connecting shaft (see figure below) which connects said disk body and said cylindrical body, but is silent in having a lifting device formed with grippers that move toward or away from each other. However, Monforte teaches that a robotic arm can be formed with multiple types of end effectors (Figures 3a-3h) and that they are all equivalent of one another where one such arm includes grippers (Figure 3f) (210) that move toward and away from one another. It would have been obvious to one of ordinary skill in the art to modify the arranging means, of Bando, with the known technique of providing arranging means formed as a lifting device having with grippers (instead of a pin) that move toward or away from each other, as taught by Monforte, and the results would have been predictable. In this situation, one could provide a lifting device that can pick up various size support elements and provide a stronger grasp on the selected element.



Response to Arguments

5. Applicant's arguments filed May 24, 2010 have been fully considered but they are not persuasive.

6. Applicant discloses that, "In addition, Ercole et al. does not disclose that "the transporting means and the suction- cup moving device share a slider". Therefore, the glass-plate working apparatus whose construction is simple such

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as set forth in claim 13 cannot be provided on the basis of the disclosure of Ercole et al.”

a. However, the examiner respectfully disagrees with this statement. The examiner believes the applicant is interpreting each reference individually rather than taking what each reference specifically teaches and applying that teaching into the combination and interpreting the combination as a whole. Ercole et al. not only teach of providing automatic arranging means but also that the automatic arranging means is attached to a slider. The combination as a whole would provide transporting means and arranging means that share slider (55).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT SCRUGGS whose telephone number is (571)272-8682. The examiner can normally be reached on Monday-Friday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT SCRUGGS/
Examiner, Art Unit 3723